4.19 Disturbed Area Stabilization (with Mulching Only)

Ds1

Definition

Applying plant residues or other suitable materials not produced on the site to the soil surface.

Purpose

Mulching is used for the following:

- To reduce runoff and erosion.
- To conserve moisture and prevent surface compaction or crusting.
- To control undesirable vegetation.
- To modify soil temperature.
- To increase biological activity in the soil.

Specifications

Temporary Protection Without Seeding

This standard applies to grades or cleared areas that may be subjected to erosion for 6 months or less, where seedings may not have a suitable growing season to produce an erosion-retardant cover but can be stabilized with a mulch cover.

Site Preparation

1. Grade as needed to permit the use of equipment for applying and anchoring mulch.

2. Install erosion control measures as required such as dikes, diversions, berms, terraces, and sediment barriers.

3. Loosen compact soil to a minimum depth of 3 inches as needed.

Mulching Materials

1. Dry straw or hay – spread at a rate of 2½ tons per acre.

2. Wood waste, chips, sawdust, or bark – spread 2 to 3 inches deep (6 to 9 tons per acre).

3. Erosion control matting or netting, such as excelsior, jute, textile, and plastic matting and netting – applied in accordance with manufacturer's recommendations.

4. Cutback asphalt, slow curing – applied at 1,200 gallons per acre (or ¼ gallon per square yard).

5. Polyethylene film – secured over banks or stockpiled soil material for temporary protection.

Applying and Anchoring Mulch

1. Apply straw or hay mulch uniformly by hand or mechanically. Anchor mulch as appropriate and feasible. Mulch may be pressed into the soil with a disk harrow with the disk set straight or with a special "packer disk." The disk may be smooth or serrated and should be 20 inches or more in diameter and 8 to 12 inches apart. The edges of the disk should be dull enough to avoid cutting the mulch as it is pressed into the soil in an erect position.

   Straw or hay that is spread with special blower-type equipment may be anchored with emulsified asphalt (Grade AE-5 or SS-1). The asphalt emulsion must be sprayed onto the mulch as it is ejected from the machine. Use 100 gallons of water per ton of mulch.

2. Wood waste should be spread uniformly on slopes that are 3:1 and flatter. No anchoring is needed.

3. Commercial matting and netting. Follow manufacturer's specification included with the material.

4. Apply asphalt so area has uniform appearance. (Note: Use in areas of pedestrian traffic could cause problems of "tracking in" or damage to shoes, clothing, etc.)

Conserve Moisture and Control Weeds

Mulching can also be used to conserve moisture and control weeds in nurseries, ornamental beds, around shrubs, and on bare areas on lawns.

Mulching Materials

Use one of the materials given below and apply at thickness indicated:

	Materials	Depth (inches)
1.	Grain straw or grass hay	6 to 10
2.	Pine needles	4 to 6
3.	Wood waste (sawdust, bark, chips)	4 to 6
4.	Shredded residues (crops, leaves, etc)	4 to 8

Completely cover area with suitable (porous) geotextile fabric. When using organic mulches, apply 20 to 30 pounds of nitrogen in addition to the normal amount needed for plant growth to offset the tie up of nitrogen (N) by decomposition of mulch.